

Mineral Industry Surveys

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SULFUR IN SEPTEMBER 1999

During the month, production of combined Frasch and recovered elemental sulfur was 753,000 metric tons, according to the U.S. Geological Survey. September production was 9% lower than that of August 1999 and 2% lower than September 1998. Shipments of these combined products were 1% lower than those of August 1999. Ending stocks for September 1999 were 455,000 tons.

Import and export data for September 1999 were not available at the time of publication and will be published in the Sulfur in October 1999 Mineral Industry Surveys along with apparent consumption. Imports of recovered sulfur for August 1999 were 196,000 tons; exports were 57,000 tons. Imports of sulfuric acid for August 1999 were 93,000 tons; exports were 12,000 tons.

Significant adjustments have been made to the sulfur import data. Reports from the Bureau of the Census appear to underreport sulfur imports, especially for material from Canada. The revised figures are based on Census information, data collected and published by the Alberta (Canada) Energy and Utilities Board (EUB) in its monthly production report, and information from other published sources. The EUB report is particularly valuable because the majority of Canadian sulfur is produced in that Province, and most of the Canadian sulfur that enters the United States comes from Alberta. When the data problems are solved, USGS will resume using Census data exclusively.

TABLE 1
SALIENT SULFUR STATISTICS 1/

(Thousand metric tons)

Period	Production				Shipments, all sources
	Frasch	Petroleum 2/	Natural gas 3/	Total 3/	
1998:	W	6,060	4,000	10,100	10,500
January-September	W	4,530 r/	3,110 r/	7,640 r/	8,000 r/
September	W	484	281	765	804
October	W	487	287	774	841
November	W	509	292	801	781
December	W	537	311	848	887
1999:					
January	W	498	333	831	828
February	W	457 r/	319 r/	776	760
March	W	510	355	865	823
April	W	510	344	854	843
May	W	503 r/	331 r/	834 r/	838 r/
June	W	470 r/	331	801 r/	734 r/
July	W	494 r/	333	827 r/	839 r/
August	W	529 r/	298	827 r/	766 r/
September	W	489 p/	264 p/	753 p/	758 p/
January-September	W	4,460 p/	2,910 p/	7,370 p/	7,190 p/

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Natural gas."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes a small quantity from coking operations.

3/ Includes data from Frasch producer.

TABLE 2
U.S. IMPORTS OF SULFUR 1/

(Thousand metric tons and thousand dollars)

Period	Canada		Mexico		Total, all countries 2/	
	Quantity	Value 3/	Quantity	Value 3/	Quantity	Value 3/
1998:	1,440	16,900	559	26,900	2,270	58,400
January-August	938 r/	13,400	376	17,900	1,520 r/	42,700 r/
August	107	611	38	1,790	182	4,290
September	104	767	59	2,840	182	4,540
October	122	934	41	1,910	181	3,700
November	139	774	41	2,020	199	3,550
December	141	958	42	2,220	193	3,830
1999:						
January	117	953	55	2,760	190	4,470
February	138	968	37	1,990	275	6,070
March	161	1,570	40	2,160	225	4,620
April	160 r/	1,470	39	2,100	213 r/	4,130
May	140	1,450	60	3,280	252	5,600
June	139	886	38	2,040	214	3,640
July	140	676	57	2,860	230	5,060
August	141 p/	1,390	37	1,850	196 p/	4,160
January-August	1,140 p/	9,360	363	19,000	1,800 p/	37,700

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include other countries not listed.

3/ Declared customs valuation.

Source: Bureau of the Census; as adjusted by U.S. Geological Survey.

TABLE 3
U.S. IMPORTS OF SULFURIC ACID 1/

(Thousand metric tons and thousand dollars)

Period	Canada			Europe			Total, all countries 2/		
	Quantity	Sulfur content	Value 3/	Quantity	Sulfur content	Value 3/	Quantity	Sulfur content	Value 3/
1998:	1,550	508	47,800	47	15	400	2,040	667	58,600
January-August	1,090	355	34,200	31 r/	10	231 r/	1,430	469 r/	42,000
August	126	41	3,670	10	3	39	159	52	4,620
September	100	32	2,830	(4/)	(4/)	22	119	39	3,750
October	126	41	3,760	11	3	52	191	63	4,490
November	111	36	3,390	(4/)	(4/)	26	158	52	4,130
December	133	43	3,610	6	2	67	142	47	4,200
1999:									
January	80	26	2,000	12	4	60	104	34	2,660
February	73	24	2,290	18	6	155	121	40	3,320
March	69	23	2,120	3	1	48	116	38	3,070
April	72	24	2,030	10	3	147	97	32	2,930
May	88	29	2,110	(4/)	(4/)	32	149	49	3,550
June	77	25	1,790	9	2	120	117	38	3,340
July	57	19	1,020	10	3	184	75	25	2,450
August	54	18	1,220	11	4	143	93	31	2,710
January-August	570	188	14,600	73	23	890	872	287	24,000

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include other countries not listed.

3/ Declared customs valuation.

4/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 4
U.S. EXPORTS OF SULFUR AND SULFURIC ACID 1/

(Thousand metric tons and thousand dollars)

Period	Sulfur		Sulfuric acid		
	Quantity	Value 2/	Quantity	Sulfur content	Value 2/
1998:	898	35,400	155	51	18,100
January-August	604	25,200	107	36	13,200
August	16	1,310	11	4	2,140
September	64	2,650	11	4	1,610
October	104	3,150	14	5	1,530
November	34	1,440	11	4	860
December	92	3,020	13	4	914
1999:					
January	51	2,640	10	3	802
February	34	2,360	16	5	1,360
March	41	3,160	11	4	1,220
April	113	4,760	13	4	1,860
May	14	1,440	13	4	1,130
June	109	3,810	12	3	1,090
July	4	918	15	5	1,960
August	57	2,940	12	4	1,040
January-August	423	22,000	102	32	10,500

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Declared f.a.s. (free alongside ship) valuation.

Source: Bureau of the Census.

TABLE 5
U.S. CONSUMPTION OF SULFUR 1/

(Thousand metric tons)

Period	Domestic sources 2/	Imports	Consumption
1998:	9,610	2,270	11,900
January-August	6,300 r/	1,520 r/	7,810 r/
August	827	182	1,010
September	678	182	860
October	712	181	893
November	733	199	932
December	814	193	1,010
1999:			
January	777	190	967
February	726	275	1,000
March	782	225	1,010
April	730	213 r/	943 r/
May	824 r/	252	1,080 r/
June	625 r/	214	839 r/
July	835 r/	230	1,070 r/
August	701	196	897
January-August	6,000	1,800	7,800

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Calculated as shipments minus exports.

TABLE 6
RECOVERED SULFUR PRODUCED AND SHIPPED IN THE UNITED STATES,
BY PAD (PETROLEUM ADMINISTRATION FOR DEFENSE) DISTRICT 1/

(Thousand metric tons)

District and source	September 1999 p/		August 1999		Total 1999 2/		Year to date 1998 r/ 2/	
	Production	Shipments	Production	Shipments	Production	Shipments	Production	Shipments
PAD 1:								
Petroleum and coke	14	15	20 r/	20	173	163	180	176
Natural gas	4	4	4	4	33	33	35	35
Total	17	19	24 r/	24	206	197	215	212
PAD 2:								
Petroleum and coke	64	64	74 r/	75 r/	606	605	665	667
Natural gas	5	4	5	5	36	36	41	42
Total	68	68	79 r/	80 r/	642	641	706	709
PAD 3: 3/								
Petroleum and coke	289	292	309 r/	310 r/	2,730	2,730	2,670	2,700
Natural gas 4/	187	194	224	160	2,080	1,940	2,260	2,620
Total 5/	476	486	533 r/	470 r/	4,820	4,670	4,930	5,320
PAD 4 and 5: 6/								
Petroleum and coke	123	124	125	124	948	944	1,010	995
Natural gas	69	61	66	67	757	742	776	768
California	94	95	90	90	792	787	833	823
Total	192	185	191	191	1,710	1,690	1,780	1,760
Grand total	753	758	827 r/	766 r/	7,370	7,190	7,640	8,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include revisions to prior months.

3/ Includes Puerto Rico and the U.S. Virgin Islands.

4/ Frasch production is included in the natural gas production to avoid disclosing company proprietary data.

5/ Includes data from Frasch producer.

6/ Quantities produced and shipped in California included in petroleum and natural gas. California total shown for information purposes only.

TABLE 7
COMPARATIVE SULFUR AND SULFURIC ACID STATISTICS 1/

(Million metric tons per year [annualized basis] and dollars per metric ton for period shown)

	1999			1998
	September	August	Year to date	total
Production	9.16 p/	9.74 r/	9.85	10.00
Shipments	9.22 p/	9.02 r/	9.61	10.50
Exports of sulfur	NA	0.67	0.64	0.90
Imports of sulfur:				
Canada	NA	1.66	1.71	1.44
Mexico	NA	0.44	0.55	0.56
Total 2/	NA	2.31	2.70	2.27
Exports of H ₂ SO ₄	NA	0.14	0.15	0.16
Imports of H ₂ SO ₄ :				
Canada	NA	0.64	0.86	1.55
Europe	NA	0.13	0.11	0.05
Total 2/	NA	1.10	1.31	2.04
Consumption: 3/				
Domestic sources	NA	8.25	9.01	9.61
Imports	NA	2.31	2.70	2.27
Total	NA	10.60	11.70	11.90
Sulfur export values 4/	NA	\$52	\$52	\$40
Sulfur import values: 4/				
Canada	NA	\$10	\$8	\$12
Mexico	NA	\$50	\$52	\$48
Average	NA	\$21	\$21	\$27
H ₂ SO ₄ export values 4/	NA	\$87	\$103	\$117
H ₂ SO ₄ import values: 4/				
Canada	NA	\$23	\$26	\$31
Europe	NA	\$13	\$12	\$9
Average	NA	\$29	\$28	\$29

p/ Preliminary. r/ Revised. NA Not available.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other countries not listed.

3/ Because trade data were not available, September consumption was not determined.

4/ Average value per ton for most recent data available.